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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,474	12/28/2004	Mami Nonomura	263421US0PCT	2696

22850 7590 03/25/2010  
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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WHITE, EVERETT NMN

ART UNIT	PAPER NUMBER
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1623

NOTIFICATION DATE	DELIVERY MODE
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03/25/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/519,474	<b>Applicant(s)</b> NONOMURA ET AL.	
	<b>Examiner</b> EVERETT WHITE	<b>Art Unit</b> 1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,6-9 and 12-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,6,12-15 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 7-9 and 16-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Applicants response filed December 1, 2009 has been received, entered and carefully considered. The response affects the instant application accordingly:
  - (A) Claims 2, 4, 5, 10 and 11 were previously canceled;
  - (B) Comments regarding Office Action have been provided drawn to:
    - (I) 103(a) rejection of claims over the Nagasawa et al WO publication in view of the Golz-Berner et al patent, rendered moot by new ground of rejection over the Nagasawa et al WO publication along.
    - (II) 103(a) rejection of claims over the Nagasawa et al WO publication in view of the Palinczar patent, which have been maintained for the reasons of record.
2. Claims 1, 3, 6-9 and 12-22 are pending in the case.

### ***Claim Rejections - 35 USC § 112***

#### ***New Ground of Rejection***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 7, 8, 16 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claims 7, 8, 16 and 17, the logic of “or” and “and/or” in the last two lines makes it unclear as to what is actually required, since the clauses all take the form of “A or B and/or C”. Depending on interpretation this can mean:

  - (1) ((A or B) and C) or C; which is to say (A and C) or (B and C) or C;
  - (2) A or (B and C) or C;
  - (3) A or B or C or (B and C).
5. Applicant's arguments with respect to Claims 7, 8, 16 and 17 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

***New Ground of Rejection***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

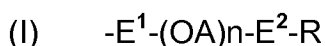
7. Claims 1, 3, 9, 12-14 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasawa et al (WO 00/73351 A1, already of record).

Applicants claim an allergen inactivating agent comprising a polysaccharide derivative as its effective component, wherein said polysaccharide derivative has a cellulose ether as its backbone, and some or all of hydrogen atoms in the hydroxy group of the polysaccharide derivative are substituted by a group represented by the following general formula (I):



wherein E<sup>1</sup> represents an alkylene containing 1 to 6 carbon atoms optionally substituted with hydroxy group or oxo group; n represents a number of 0 to 50; A independently represents an alkylene containing 1 to 6 carbon atoms, the number of A being n; E<sup>2</sup> represents ether bond or oxycarbonyl group; R represents an alkyl group containing 4 to 30 carbon atoms optionally substituted with hydroxy group, a sulfoalkyl group containing 1 to 5 carbon atoms optionally substituted with hydroxy group, or a salt thereof, wherein the cellulose ether has an average molecular weight of 100,000 to 600,000. Applicants further claim a face mask comprising the allergen inactivating agent.

The Nagasawa et al WO publication discloses a polysaccharide derivative having a structure formed by replacing part or all of the hydrogen atoms of the hydroxyl groups in a polysaccharide or a derivative thereof with a group represented by the formula



wherein E<sup>1</sup> represents C<sub>1-6</sub> divalent saturated hydrocarbon group optionally substituted by hydroxy or oxo; n is a number of 8 to 300; nA's are the same or different and each represents a C<sub>1-6</sub> divalent saturated hydrocarbon group; E<sup>2</sup> represents an ether bond or oxycarbonyl; and R represents C<sub>4-30</sub> alkyl optionally substituted by hydroxyl (see Abstract). The specification of the Nagasawa et al publication discloses hydroxyethyl cellulose as an example of the polysaccharide derivative (see page 5 of the machine translated document), which embraces instant Claim 3. The presence of the polysaccharide derivative inherently treats allergen in the various toiletry cited in the Nagasawa et al publication since products of identical chemical composition cannot have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada* 15 USPQ 2d 1655, 1658 (Fed. Cir.1990). See MPEP 2112.01. See page 6, 2<sup>nd</sup> paragraph of the machine translated document of the Nagasawa et al publication wherein weight average molecular weight of the polysaccharides thereof ranges from 10,000 to 5 million, which covers the molecular weight range recited in instant Claims 1 and 13.

The instantly claimed allergen inactivating agent comprising a polysaccharide derivative selected as cellulose ether as its effective component of the instant claims differs from the polysaccharide derivative of the Nagasawa et al publication by claiming some group of formula I of instant Claim 1 that is outside of formula I of the Nagasawa et al WO publication, such as where n in instant formula I is 0 to 7.

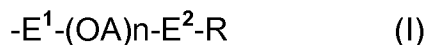
One having ordinary skill in the art would have been motivated to employ the polysaccharide derivative of the Nagasawa publication with the expectation of obtaining a desired result because the skilled artisan would have expected the analogous starting materials to react similarly.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of Applicants invention to replace the polysaccharide derivative having a structure that comprises a group of formula I of the Nagasawa et al publication with a homologue such as group wherein n of formula I is 7 in view of their closely related structures and the resulting expectation of similar allergen inactivating properties.

8. Applicant's arguments with respect to Claims 1, 3, 9, 12-14 and 18-22 have been considered but are moot in view of the new ground(s) of rejection.

9. Claims 1, 3, 6, 9, 12-15 and 18-22 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasawa et al (WO 00/73351 A1, already of record) in view of Palinczar (US Patent No.4,671,955, already of record) for the reasons disclosed below.

Applicants claim an allergen inactivating agent comprising a polysaccharide derivative as its effective component, wherein said polysaccharide derivative has a cellulose ether as its backbone, and some or all of hydrogen atoms in the hydroxy group of the polysaccharide derivative are substituted by a group represented by the following general formula (I):

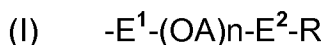


wherein  $E^1$  represents an alkylene containing 1 to 6 carbon atoms optionally substituted with hydroxy group or oxo group; n represents a number of 0 to 50; A independently represents an alkylene containing 1 to 6 carbon atoms, the number of A being n;  $E^2$

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represents ether bond or oxycarbonyl group; R represents an alkyl group containing 4 to 30 carbon atoms optionally substituted with hydroxy group, a sulfoalkyl group containing 1 to 5 carbon atoms optionally substituted with hydroxy group, or a salt thereof, wherein the cellulose ether has an average molecular weight of 100,000 to 600,000. Applicants further claim that the allergen inactivating agent is an aerosol.

The Nagasawa et al WO publication discloses a polysaccharide derivative having a structure formed by replacing part or all of the hydrogen atoms of the hydroxyl groups in a polysaccharide or a derivative thereof with a group represented by the formula



wherein  $E^1$  represents  $C_{1-6}$  divalent saturated hydrocarbon group optionally substituted by hydroxy or oxo;  $n$  is a number of 8 to 300;  $nA$ 's are the same or different and each represents a  $C_{1-6}$  divalent saturated hydrocarbon group;  $E^2$  represents an ether bond or oxycarbonyl; and R represents  $C_{4-30}$  alkyl optionally substituted by hydroxyl (see Abstract). The specification of the Nagasawa et al publication discloses hydroxyethyl cellulose as an example of the polysaccharide derivative (see page 5 of the machine translated document), which embraces instant Claim 3. The presence of the polysaccharide derivative inherently treats allergen in the various toiletry cited in the Nagasawa et al publication since products of identical chemical composition cannot have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada* 15 USPQ 2d 1655, 1658 (Fed. Cir. 1990). See MPEP 2112.01. See page 6, 2<sup>nd</sup> paragraph of the machine translated document of the Nagasawa et al publication wherein weight average molecular weight of the polysaccharides thereof ranges from 10,000 to 5 million, which covers the molecular weight range recited in instant Claims 1 and 13.

The instantly claimed allergen inactivating agent comprising a polysaccharide derivative selected as cellulose ether as its effective component of the instant claims differs from the polysaccharide derivative of the Nagasawa et al publication by claiming that the allergen inactivating agent is an aerosol.

The Palinczar patent shows that the presence of a hydroxyethylcellulose, a cellulose ether, in an aerosol is known in the art. See column 3, lines 6-10 of the Palinczar patent wherein hydroxyethylcellulose is disclosed as a component of a sunscreen composition in a form that may be selected as an aerosols which provide ultraviolet light protection to the skin.

One of ordinary skill in this art would be motivated to combine the teaching of the Nagasawa et al publication with the teaching of the Palinczar patent since both references disclose hydroxyethyl cellulose as a component of cosmetic products.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the hydroxyethylcellulose of the Nagasawa et al publication with another hydroxyethyl cellulose in view of the recognition in the art, as evidenced by the Palinczar patent, that the hydroxyethylcellulose increases the aesthetic water-proof property of sunscreen compositions.

#### ***Response to Arguments***

10. Applicant's arguments filed December 1, 2009 have been fully considered but they are not persuasive. Applicants argue against the rejection on the ground that the Nagasawa et al publication does not describe specific cellulose ethers in the examples thereof that meet the instantly claimed molecular weight and n values disclosed in the formula  $-E^1-(OA)_n-E^2-R$ . The data from Table 3 of the instant specification disclosed in Applicants arguments which compares Compounds 1 and 17 of the Nagasawa et al publication with Compounds 4 and 3 of smaller molecular weight size is noted. However, this argument is not persuasive since the teaching of the Nagasawa et al publication is not limited to the examples thereof since the Nagasawa et al publication does disclose a general teaching of the molecular weight of cellulose ethers and n values of said formula that covers the cellulose ether molecular weights and n values disclosed in the instant claims. This argument is also not persuasive since the instant claims do not recite cellulose ethers of specific molecular weight and n value, even though the molecular weight and n values that are recited in the instant claims are more limited than the general teaching disclosed in the Nagasawa et al publication. Table 4 suggests that the degree of effectiveness of the instantly claimed cellulose ether



compounds when compared to cellulose ether compounds of the prior art that are outside of the molecular weight range that's being claimed appears to be dependent on the type of allergen being treated and not on a large population of allergens as instantly claimed. Also, Applicants arguments regarding unexpected results is not persuasive since a review of the entirety of Table 3 in the specification discloses results for many different embodiments having MW of 100,000, 200,000, 500,000, and 1,500,000. There is not clear correlation between MW and efficacy because of the confounding effect of other variables such as degree of substitution.

The Palinczar patent is only cited to show that the presence of a ethyl hydroxyethylcellulose in an aerosol is well known in the art.

Accordingly, the rejection of the instant claims under 35 U.S.C. 103(a) as being unpatentable over Nagasawa et al (WO 00/73351 A1) in view of Palinczar (US Patent No.4,671,955) is maintained for the reasons of record.

#### ***Allowable Subject Matter***

11. Claims 7, 8, 16 and 17 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

12. Claims 7, 8, 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose or fairly suggest a mask and a sheet comprising an allergen inactivating agent comprising a polysaccharide derivative wherein the polysaccharide derivative has a cellulose ether as its backbone and some or all of the hydrogen atoms in the hydroxyl group of the polysaccharide derivative are substituted by a group represented by formula (I),  $-E^1-(OA)_n-E^2-R$ , as described in instant Claim 1.

***Summary***

14. All the pending claims (Claims 1, 3, 6-9 and 12-22) are rejected.

***Examiner's Telephone Number, Fax Number, and Other Information***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Everett White whose telephone number is 571-272-0660. The examiner can normally be reached on 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia A. Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Everett White/  
Examiner, Art Unit 1623

/Shaojia Anna Jiang/  
Supervisory Patent Examiner, Art Unit 1623